Industrial Turbine Fans

The Westinghouse engineer at left is examining the blades of an advanced, controllable-pitch axial fan used in electric power generation, first of its type designed in the United States. Now operating as part of Oklahoma Gas and Electric Company's generating system, the fan is the product of a five-year development program conducted by Westinghouse Electric Corporation's Research and Development Center, Pittsburgh, Pennsylvania. Development of this and similar fans was aided by four computer programs supplied to the Center by NASA's Computer Software Management and Information Center (COSMIC)®. The COSMIC programs were used to determine the sensitivity of large industrial turbines and fans to particulate matter—such as ash and dust—which can cause turbine damage by erosion. Use of the programs contributed to improved product reliability by helping the Research and Development Center design fans less prone to erosion. The programs also enabled the Center to realize substantial savings in development costs.

Solar Collectors

In this photo, the panels at left are collectors for a solar energy system which provides heating for a drive-in bank in Akron, Ohio. The collectors were designed and manufactured by Solar Energy Products Company, Avon Lake, Ohio, a firm established by three former NASA employees. Company president Frank Rom, an example of a personnel-type technology transfer, was a research director at Lewis Research Center, which conducts extensive solar heating and cooling research, including development and testing of high-efficiency flat-plate collectors. In the course of his service at Lewis, Rom acquired solar energy expertise which helped the company develop two types of collectors, one for use in domestic/commercial heating systems and the other for drying grain. Solar Energy Products Company licensed production rights for the grain dryer but continues to produce installations for homes and commercial buildings.

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